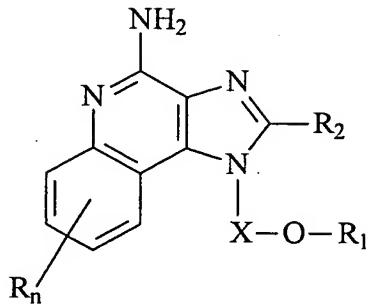


WHAT IS CLAIMED IS:

1. A compound of the formula (I):

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(I)

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wherein: X is -CHR₅-, -CHR₅-alkyl-, or -CHR₅-alkenyl-;
R₁ is selected from the group consisting of:

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- R₄-NR₃-SO₂-R₆-alkyl;
- R₄-NR₃-SO₂-R₆-alkenyl;
- R₄-NR₃-SO₂-R₆-aryl;
- R₄-NR₃-SO₂-R₆-heteroaryl;
- R₄-NR₃-SO₂-R₆-heterocyclyl;
- R₄-NR₃-SO₂-R₇;
- R₄-NR₃-SO₂-NR₅-R₆-alkyl;
- R₄-NR₃-SO₂-NR₅-R₆-alkenyl;

20

- R₄-NR₃-SO₂-NR₅-R₆-aryl;
- R₄-NR₃-SO₂-NR₅-R₆-heteroaryl;
- R₄-NR₃-SO₂-NR₅-R₆-heterocyclyl; and
- R₄-NR₃-SO₂-NH₂;

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R₂ is selected from the group consisting of:

- hydrogen;
- alkyl;
- alkenyl;

- aryl;
- heteroaryl;
- heterocyclyl;
- alkyl-Y-alkyl;
- alkyl-Y- alkenyl;
- alkyl-Y-aryl; and
- alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

Y is -O- or -S(O)₀₋₂₋

R₃ is H, C₁₋₁₀ alkyl, or arylalkyl:

R₄ is alkyl or alkenyl, which may be interrupted by one or more –O– groups; or R₃ and R₄ can join together to form a ring:

each R_5 is independently H, C₁₋₁₀ alkyl, or C₂₋₁₀ alkenyl;

R_6 is a bond, alkyl, or alkenyl, which may be interrupted by one or more $-O-$ groups:

R₇ is C₁₋₁₀ alkyl; or R₃ and R₇ can join together to form a ring;

each **R** present is independently selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl;

or a pharmaceutically acceptable salt thereof.

2. A compound or salt of claim 1 wherein X is $-\text{CH}(\text{alkyl})\text{-alkyl}-$, wherein the alkyl groups can be the same or different.

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3. A compound or salt of claim 1 wherein X is $-\text{CH}_2\text{-CH}_2-$.

4. A compound or salt of claim 1 wherein X is $-\text{CH}(\text{C}_2\text{H}_5)\text{-CH}_2-$.

10 5. A compound or salt of claim 1 wherein R_2 is H.

6. A compound or salt of claim 1 wherein R_2 is alkyl.

7. A compound or salt of claim 1 wherein R_2 is $-\text{alkyl-O-alkyl}$.

15 8. A compound or salt of claim 1 wherein R_3 and R_4 join to form a heterocyclic ring.

9. A compound or salt of claim 1 wherein R_1 is $-\text{R}_4\text{-NR}_3\text{-SO}_2\text{-R}_6\text{-aryl}$.

20 10. A compound or salt of claim 1 wherein n is 0.

11. A compound selected from the group consisting of:

N -(2-{2-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethoxy}ethyl)methanesulfonamide;

25 N -(2-{2-[4-amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethoxy}ethyl)methanesulfonamide;

N -(2-{2-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethoxy}ethyl)-*N*-methylmethanesulfonamide;

30 N -(2-{2-[4-amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1*H*-imidazo[4,5-*c*]quinolin-1-yl]ethoxy}ethyl)-*N*-methylmethanesulfonamide;

2-buty-1-{2-[2-(1,1-dioxidoisothiazolidin-2-yl)ethoxy]ethyl}-1*H*-imidazo[4,5-*c*]quinolin-4-amine; and

N-[10-(4-amino-2-methyl-1*H*-imidazo[4,5-*c*]quinolin-1-yl)-4,7-dioxadecyl]-5-dimethylaminonaphthalene-1-sulfonamide;
or a pharmaceutically acceptable salt thereof.

5 12. A compound selected from the group consisting of:

N-(2-{2-[4-amino-2-(2-methoxyethyl)-1*H*-imidazo[4, 5-*c*]quinolin-1-yl]ethoxy}ethyl)-N-methylpropane-2-sulfonamide;

N-{2-[2-(4-amino-2-ethyl-1*H*-imidazo[4, 5-*c*]quinolin-1-yl)ethoxy]ethyl}methanesulfonamide;

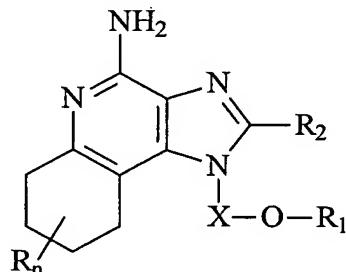
10 N-{2-[2-(4-amino-2-methyl-1*H*-imidazo[4, 5-*c*]quinolin-1-yl)ethoxy]ethyl}methanesulfonamide; and

N-{2-[2-(4-amino-2-methyl-1*H*-imidazo[4, 5-*c*]quinolin-1-yl)ethoxy]ethyl}propane-2-sulfonamide;

or a pharmaceutically acceptable salt thereof.

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13. A compound of the formula (II)



(II)

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wherein: X is -CHR₅-; -CHR₅-alkyl-; or -CHR₅-alkenyl-;

R₁ is selected from the group consisting of:

-R₄-NR₃-SO₂-R₆-alkyl;

-R₄-NR₃-SO₂-R₆-alkenyl;

-R₄-NR₃-SO₂-R₆-aryl;

-R₄-NR₃-SO₂-R₆-heteroaryl;

-R₄-NR₃-SO₂-R₆-heterocyclyl;

25

-R₄-NR₃-SO₂-R₇;
-R₄-NR₃-SO₂-NR₅-R₆-alkyl;
-R₄-NR₃-SO₂-NR₅-R₆-alkenyl;
-R₄-NR₃-SO₂-NR₅-R₆-aryl;
5 -R₄-NR₃-SO₂-NR₅-R₆-heteroaryl;
-R₄-NR₃-SO₂-NR₅-R₆-heterocyclyl; and
-R₄-NR₃-SO₂-NH₂;

R₂ is selected from the group consisting of:

10 -hydrogen;
-alkyl;
-alkenyl;
-aryl;
-heteroaryl;
-heterocyclyl;
15 -alkyl-Y-alkyl;
-alkyl-Y- alkenyl;
-alkyl-Y-aryl; and
- alkyl or alkenyl substituted by one or more substituents selected
from the group consisting of:
20 -OH;
-halogen;
-N(R₅)₂;
-CO-N(R₅)₂;
-CO-C₁₋₁₀ alkyl;
25 -CO-O-C₁₋₁₀ alkyl;
-N₃;
-aryl;
-heteroaryl;
-heterocyclyl;
30 -CO-aryl; and
-CO-heteroaryl;

Y is -O- or -S(O)₀₋₂₋;
R₃ is H, C₁₋₁₀ alkyl, or arylalkyl;
R₄ is alkyl or alkenyl, which may be interrupted by one or more -O- groups; or R₃ and R₄ can join together to form a ring;
5 each R₅ is independently H, C₁₋₁₀ alkyl, or C₂₋₁₀ alkenyl;
R₆ is a bond, alkyl, or alkenyl, which may be interrupted by one or more -O- groups;
R₇ is C₁₋₁₀ alkyl; or R₃ and R₇ can join together to form a ring;
n is 0 to 4; and
10 each R present is independently selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen, and trifluoromethyl; or a pharmaceutically acceptable salt thereof.

14. A compound or salt of claim 13 wherein R₂ is H or alkyl.

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15. A compound or salt of claim 13 wherein R₂ is -alkyl-O-alkyl.

16. A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 1 and a pharmaceutically acceptable carrier.

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17. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 1 to the animal.

18. The method of claim 17 wherein the cytokine is IFN- α .

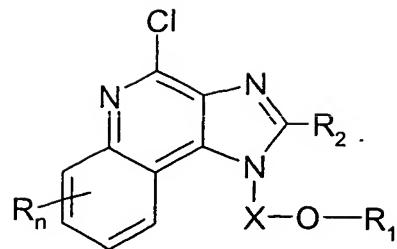
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19. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 1 to the animal.

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20. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 1 to the animal.

21. A compound of the formula (III):



(III)

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wherein **X** is $-\text{CHR}_5-$, $-\text{CHR}_5\text{-alkyl}-$, or $-\text{CHR}_5\text{-alkenyl}-$;

R₁ is selected from the group consisting of:

- R₄-NR₃-SO₂-R₆-alkyl;
- R₄-NR₃-SO₂-R₆-alkenyl;
- R₄-NR₃-SO₂-R₆-aryl;
- R₄-NR₃-SO₂-R₆-heteroaryl;
- R₄-NR₃-SO₂-R₆-heterocyclyl;
- R₄-NR₃-SO₂-R₇;
- R₄-NR₃-SO₂-NR₅-R₆-alkyl;
- R₄-NR₃-SO₂-NR₅-R₆-alkenyl;
- R₄-NR₃-SO₂-NR₅-R₆-aryl;
- R₄-NR₃-SO₂-NR₅-R₆-heteroaryl;
- R₄-NR₃-SO₂-NR₅-R₆-heterocyclyl; and
- R₄-NR₃-SO₂-NH₂;

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R₂ is selected from the group consisting of:

- hydrogen;
- alkyl;
- alkenyl;
- aryl;
- heteroaryl;
- heterocyclyl;
- alkyl-Y-alkyl;
- alkyl-Y- alkenyl;

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-alkyl-Y-aryl; and
- alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

-OH;

5 -halogen;

-N(R₅)₂;

-CO-N(R₅)₂;

-CO-C₁₋₁₀ alkyl;

-CO-O-C₁₋₁₀ alkyl;

10 -N₃;

-aryl;

-heteroaryl;

-heterocyclyl;

-CO-aryl; and

15 -CO-heteroaryl;

Y is -O- or -S(O)₀₋₂-;

R₃ is H, C₁₋₁₀ alkyl, or arylalkyl;

R₄ is alkyl or alkenyl, which may be interrupted by one or more -O- groups; or R₄ and R₃ can join to form a ring;

20 each R₅ is independently H, C₁₋₁₀ alkyl, or C₂₋₁₀ alkenyl;

R₆ is a bond, or is alkyl or alkenyl, which may be interrupted by one or more -O- groups;

R₇ is C₁₋₁₀ alkyl; or R₃ and R₇ can join together to form a ring;

n is 0 to 4; and

25 each R present is independently selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl; or a pharmaceutically acceptable salt thereof.

22. A pharmaceutical composition comprising a therapeutically effective amount of a
30 compound or salt of claim 13 and a pharmaceutically acceptable carrier.

23. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 13 to the animal.

24. The method of claim 23 wherein the cytokine is IFN- α .

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25. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 13 to the animal.

10 26. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 13 to the animal.